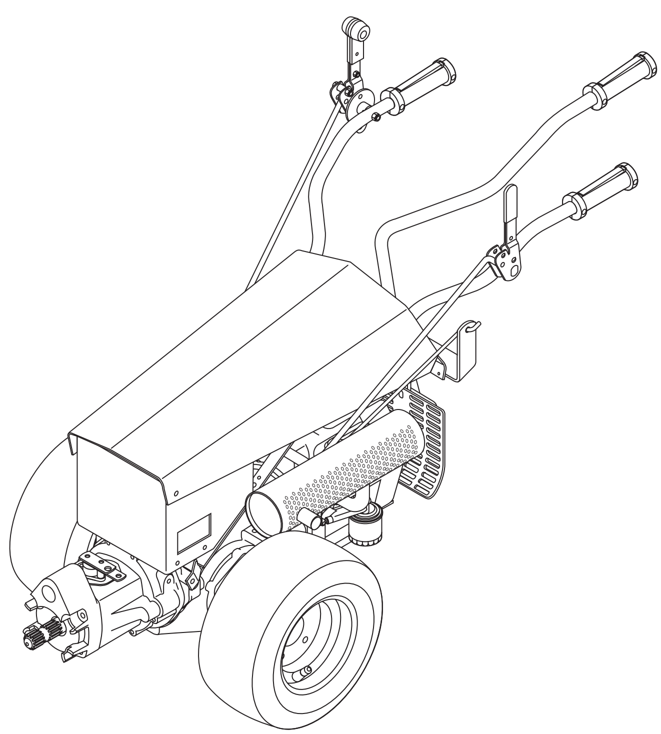
GRAVELY™

Professional 2-Wheel Tractor

Owner/Operator Manual

Models

985114 - 16 HP
985115 - 8.5 HP
985117 - 13.5 HP
985119 - 12 HP



08499300 1/03
Printed in USA

CONTROLS AND FEATURES

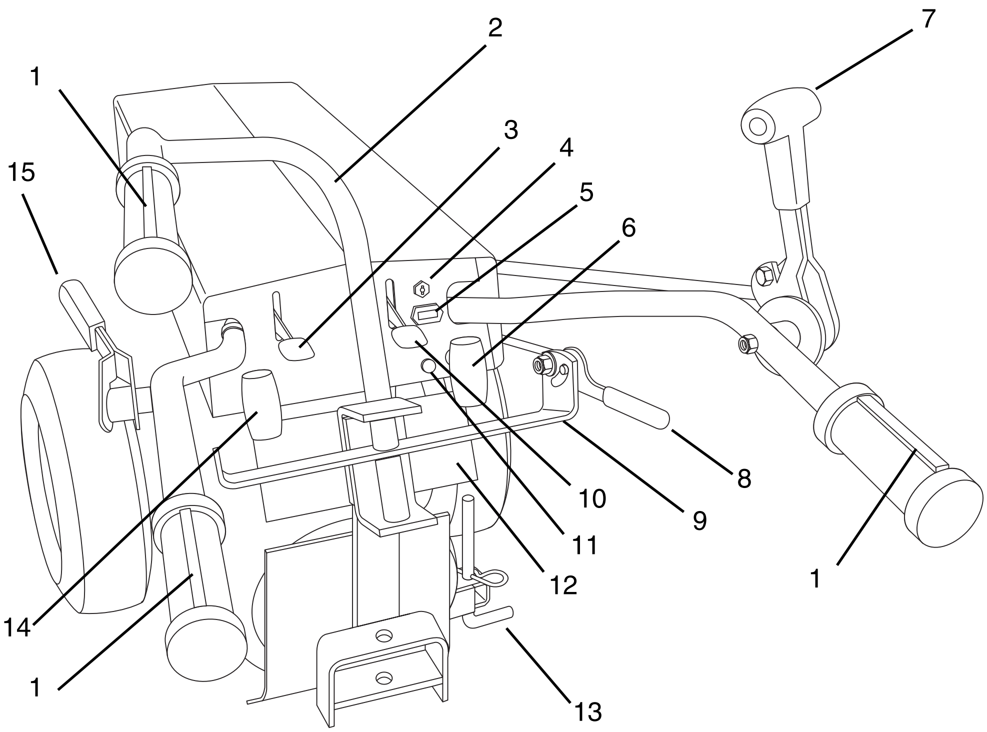


Figure 1

ENGLISH

1. Operator Presence Control
2. Steering Brake Handlebar
3. Throttle Control
4. Ignition Switch
5. Hourmeter
6. Range Shift Handle (Two Speed Axle)
7. Direction Control Lever
8. Parking Brake Handle (Optional on 8.5HP)
9. Brake Handle Cross Bar
10. Choke Lever (Robin & Kohler)
11. Choke Control Knob (Briggs & Stratton)
12. Instruction Plate
13. Kick Stand
14. PTO Control
15. Gear Shift Lever (Hi/Low Gear)

⚠ WARNING ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

OL4030

TABLE OF CONTENTS

INTRODUCTION

THE MANUAL

Before operation of unit, carefully and completely read your manuals. The contents will provide you with an understanding of safety instructions and controls during normal operation and maintenance.

All reference to left, right, front, or rear are given from operator standing in operation position and facing the direction of forward travel.

MODEL AND SERIAL NUMBERS

Transfer model & serial number label from product registration here.

When ordering publications, replacement parts, or making service inquiries, know the Model and Serial numbers of your unit and engine.

Numbers are located on the product registration form in the unit literature package. They are printed on a serial number label, located on the frame of your unit (Figure 2).

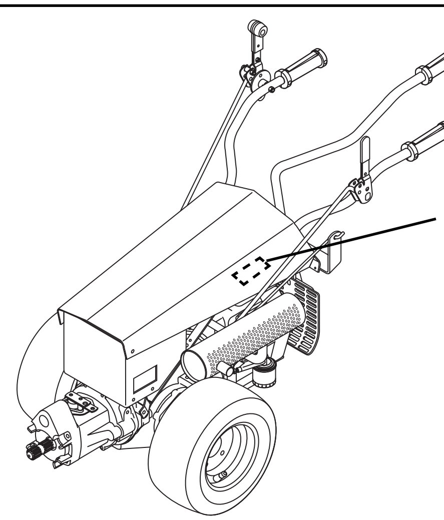


Figure 2

PRODUCT REGISTRATION

The Gravely dealer must register the product at the time of purchase. Registering the product will help the company process warranty claims or contact you with the latest service information. All claims meeting requirements during the limited warranty period will be honored, whether or not the product registration card is returned. Keep a proof of purchase if you do not register your unit.

Customer Note: If Dealer does not register your product, please fill out, sign and return the product registration card to Gravely.

UNAUTHORIZED REPLACEMENT PARTS

Use only Gravely replacement parts. The replacement of any part on this equipment with anything other than a Gravely authorized replacement part may adversely affect the performance, durability, and safety of this unit and may void the warranty. Gravely disclaims liability for any claims or damages, whether regarding warranty, property damage, personal injury or death arising out of the use of unauthorized replacement parts.

NOTE: To locate your nearest Gravely Dealer, call 1-800-472-8359 or go to www.gravely.com on the internet.

DISCLAIMER

Gravely reserves the right to discontinue, change, and improve its products at any time without public notice or obligation to the purchaser. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your unit.

DEALER DELIVERY

Dealer should:

1. Test brakes after tractor is assembled to be sure adjustment has not been disturbed in shipment. Wheel brakes are properly adjusted at factory.

2. Check the safety interlock system to make sure that it is functioning properly. Unit must not start unless direction control lever is in neutral (N) and Power Takeoff (PTO) is disengaged (Off). Engine must stop if operator releases the handlebar with the direction control lever or PTO engaged (On). See *Safety Interlock System* on page 11.
3. Fill out Original Purchaser Registration Card and return the card to Gravely.
4. Explain Gravely Limited Warranty Policy.
5. Explain recommended lubrication and maintenance. Advise customer on adjustments. Instruct customer on controls and operation of unit. Discuss and emphasize the Safety Precautions. Give customer Owner/Operator, Parts, and Engine Manuals. Advise customer to thoroughly read and understand them.

Customer Note: Your Dealer has been provided complete setup and preparation instructions which must be completed prior to you taking delivery of this unit. The dealer is required to review important information in this manual with you before or upon delivery of the unit or attachment.

SAFETY

WARNING: This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the safety instructions in the manuals and on decals could result in serious injury or death.

Slopes are a major factor related to loss-of-control and tip-over accidents. Operation on all slopes requires extra caution.

Tragic accidents can occur if the operator is not alert to the presence of children. Never assume that children will remain where you last saw them.

Gasoline is extremely flammable and the vapors are explosive, handle with care.

Disengage attachment, stop unit and engine, remove key, engage parking brake, and allow moving parts to stop before leaving operator's position.

SAFETY ALERTS

Look for these symbols to point out important safety precautions. They mean:

Attention!

Personal Safety Is Involved!

Become Alert!

Obey The Message!

The safety alert symbols above and signal words below are used on decals and in this manual.

Read and understand all safety messages.

DANGER: IMMINENTLY HAZARDOUS SITUATION! If not avoided, WILL RESULT in death or serious injury.

WARNING: POTENTIALLY HAZARDOUS SITUATION! If not avoided, COULD RESULT in death or serious injury.

CAUTION: POTENTIALLY HAZARDOUS SITUATION! If not avoided, MAY RESULT in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTATIONS

NOTE: General reference information for proper operation and maintenance practices.

IMPORTANT: Specific procedures or information required to prevent damage to unit or attachment.

PRACTICES AND LAWS

Practice usual and customary safe working precautions, for the benefit of yourself and others. Understand and follow all safety messages. Be alert to unsafe conditions and the possibility of minor, moderate, or serious injury or death. Learn applicable rules and laws in your area, including those that may restrict the age of the operator.

REQUIRED OPERATOR TRAINING

Original purchaser of this unit was instructed by the seller on safe and proper operation. If unit is to be used by someone other than original purchaser; loaned, rented or sold, ALWAYS provide this manual and any needed safety training before operation.

SAFETY DECALS AND LOCATIONS

ALWAYS replace missing or damaged Safety Decals.
Refer to Figure 3 below for Safety Decal locations.

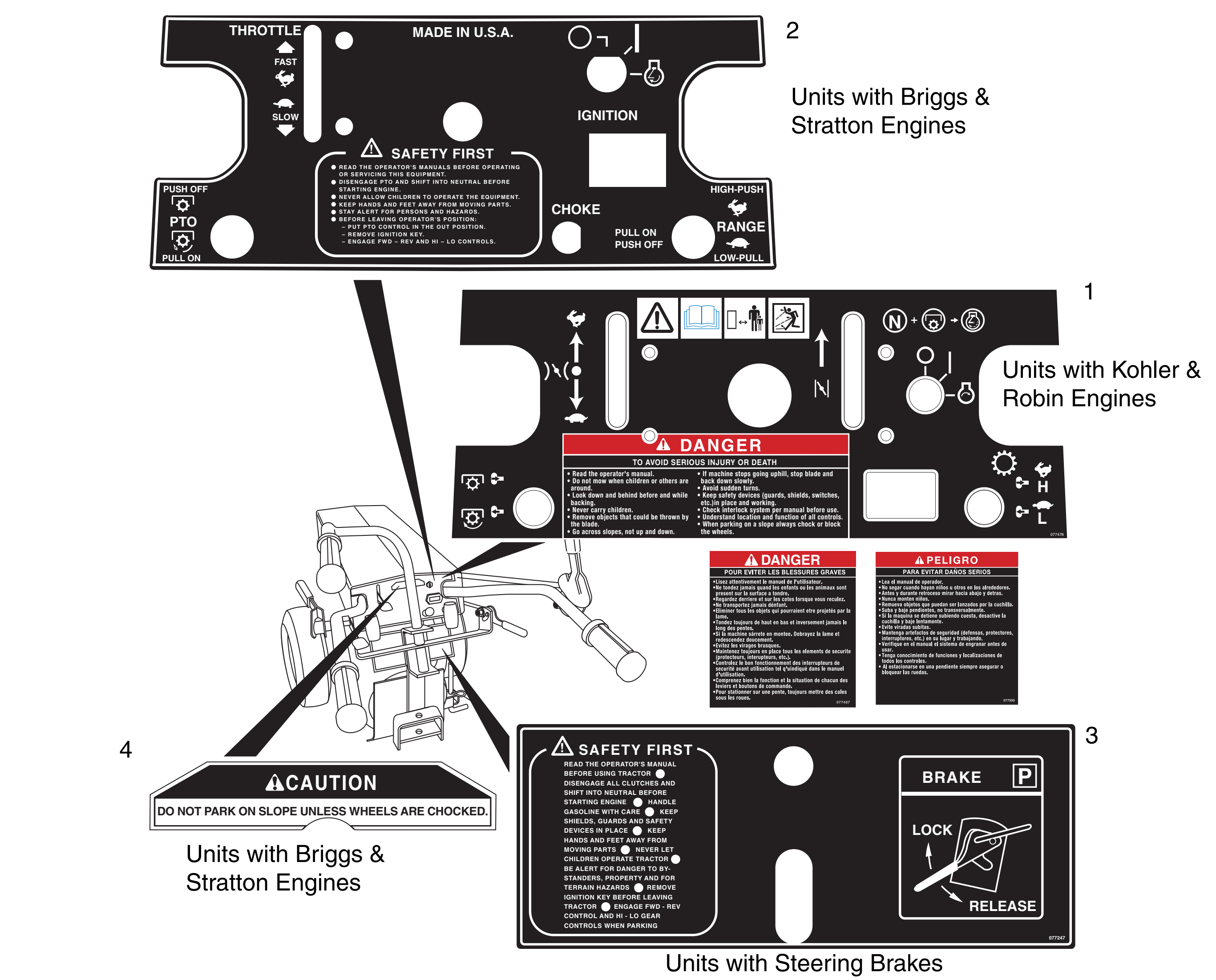
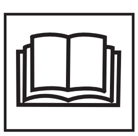


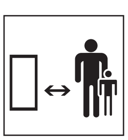
Figure 3

1. DANGER!

To Avoid Injury or Death



Read the operator's manual.



Do not mow when children or others are around.

- Look down and behind before and while backing.
- Never carry children.



Remove objects that could be thrown by the blade.

- Go across slopes, not up and down.
- If machine stops going uphill, stop blade and back down slowly.
- Keep safety devices (guards, shields, switches, etc.) in place and working.

- Check interlock system per manual before use.
- Understand location and function of all controls.
- When parking on a slope always chock or block the wheels.

2. SAFETY FIRST

- Read the operator's manuals before operating or servicing this equipment.
- Disengage the PTO and shift into neutral before starting engine.
- Never allow children to operate the equipment.
- Keep hands and feet away from moving parts.
- Stay alert for persons and hazards.
- Before leaving operator's position:
  - Put PTO control in the out position.
  - Remove ignition key.
  - Engage FWD-REV and Hi-Lo controls.

3. SAFETY FIRST

- Read the operator's manuals before using tractor.
- Disengage all clutches and shift into neutral before starting engine.
- Handle gasoline with care.
- Keep shields, guards and safety devices in place.
- Keep hands and feet away from moving parts.
- Never let children operate tractor.
- Be alert for danger to bystanders, property and for terrain hazards.
- Remove ignition key before leaving tractor.
- Engage FWD-REV control and Hi-Lo gear controls when parking.

4. CAUTION!

Do not park on a slope unless wheels are chocked.

SAFETY RULES

Read, understand and follow all safety practices in Owner/Operator Manual before beginning assembly. Failure to follow instructions could result in personal injury and/or damage to unit.

ALWAYS remove key (if equipped) and disconnect wire from spark plug before assembly. Unintentional engine start up can cause death or serious injury.

Complete a walk around inspection of unit and work area to understand:

- Work area
- Your unit
- All safety decals

ALWAYS check overhead and side clearances carefully before operation.

ALWAYS be aware of traffic when operating along streets or curbs.

Keep children and people away.

Keep children out of work area and under watchful care of a responsible adult.

Keep area of operation clear of all toys, pets, and debris. Thrown objects can cause injury.

Check for weak spots on docks, ramps or floors. Avoid uneven work areas and rough terrain.

Avoid slippery surfaces. ALWAYS be sure of your footing.

DO NOT operate on wet grass.

Dust, smoke, fog, etc. can reduce vision and cause an accident. Operate unit only when there is good visibility and light.

Read the entire Owner/Operator manual and other training material. If the operator or the mechanic cannot read the manual, it is the owner's responsibility to explain it to them. Only the user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

- Only trained adults may operate or service unit
- Training includes actual operation

NEVER allow children to operate or play on or near unit.

Be alert and shut off unit if children enter area.

Never carry passengers.

NEVER operate unit after or during the use of medication, drugs or alcohol. Safe operation requires your complete and unimpaired attention at all times.

NEVER allow anyone to operate this unit when their alertness or coordination is impaired.

Wear adequate safety gear, protective gloves and footwear.

NEVER wear open sandals or canvas shoes during operation.

Protect eyes, face and head from objects that may be thrown from unit. Wear appropriate hearing protection.

Sharp edges can cut. Moving parts can cut off fingers or a hand. Wrap blade(s), wear sturdy gloves and use extreme caution when servicing. On multi-blade mowers, rotation of one blade will cause all blades to rotate.

ALWAYS keep hands and feet away from all rotating parts during operation. Rotating parts can cut off body parts.

ALWAYS keep hands away from all pinch points.

DO NOT touch unit parts which might be hot from operation. Allow parts to cool before attempting to maintain, adjust or service.

NEVER place your hands or any part of your body or clothing inside or near any moving part while unit is running.

DO NOT wear loose clothing or jewelry. Tie back hair that may get caught in rotating parts.

Keep children and people away from unit during operation.

Fumes from engine exhaust can cause injury or death.

DO NOT run engine in an enclosed area. Always provide good ventilation.

Thrown objects can cause injury and property damage. DO NOT point discharge at anyone or discharge directly onto paved or gravel surfaces.

Always stand clear of the discharge area when operating this unit.

Read, understand, and follow all instructions in the manual and on the machine before starting.

Understand:

- How to operate all controls
- The functions of all controls
- How to STOP in an Emergency
- Braking and steering characteristics
- Turning radius and clearance

ALWAYS keep protective structures, guards, and panels in good repair, in place and securely fastened.

NEVER modify or remove safety devices.

ALWAYS keep discharge cover or complete grass catcher in place and in proper working condition.

Check steering control operation frequently. Adjust and service as required.

Safety Interlock System must function properly. DO NOT operate unit if operator presence control is damaged or disabled.

If equipment vibrates abnormally, stop engine at once, disengage PTO, wait for all moving parts to stop, and remove key. Check for any damage or loose parts. Repair before restart.

Before starting engine: disengage PTO and place unit in neutral.

DO NOT operate at too fast a rate. DO NOT change engine governor settings or over-speed engine. Slow down and turn corners slowly.

Disengage PTO when attachment is not in use. ALWAYS turn off power to attachment when travelling, crossing driveways, etc.

Avoid uneven and rough terrain. DO NOT operate near drop offs, ditches, or embankments. Unit can suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.

DO NOT try to stabilize unit by putting foot on ground when operating with applicable riding attachments.

When engine is running and speed control lever is forward, holding only one steering lever will cause unit to circle around one drive wheel.

Use care when approaching blind corners, shrubs, trees or other objects that may obscure view.

ALWAYS disengage PTO, stop unit and engine, remove key and allow moving parts to stop before leaving operator's position.

Never leave a running unit unattended. ALWAYS shut off engine before leaving unit.

ALWAYS remove key to prevent unauthorized use.

DO NOT operate in reverse unless absolutely necessary. ALWAYS backup slowly. ALWAYS look down and behind, before and while backing.

DO NOT operate on steep slopes. DO NOT operate on slopes of more than 10°. Operate across the face of slopes, not up and down.

Turf conditions can affect the unit's stability.

Keep all movement on slopes slow and gradual. DO NOT make sudden changes in speed or direction. Use a slow speed to avoid stopping or shifting on slopes. Avoid starting or stopping on a slope.

DO NOT park unit on a slope unless absolutely necessary. When parking on a slope always chock or block wheels.

Use extra care when loading or unloading unit onto trailer or truck.

Secure unit chassis to transport vehicle. NEVER secure from rods or linkages that could be damaged.

DO NOT transport machine while engine is running.

Keep unit free of grass, leaves, or other debris. Clean up oil or fuel spills.

This product is equipped with an internal combustion engine. DO NOT use on or near any unimproved, forest covered or brush covered land unless the exhaust system is equipped with a spark arrester meeting applicable local, state or federal laws. A spark arrester, if used, must be maintained in effective working order by the operator.

Fuel is highly flammable and its vapors are explosive. Handle with care. Use an approved fuel container.

No smoking, No sparks, No flames. ALWAYS allow engine to cool before servicing.

NEVER fill fuel tank when engine is running or hot from operation.

NEVER fill or drain fuel tank indoors.

Replace fuel cap securely and clean up spilled fuel.

Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.

When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

If fuel is spilled on clothing, change clothing immediately.

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Reverse connections may cause sparks which may result in injury. ALWAYS connect/disconnect cables in proper order.

Poisonous battery fluid contains sulfuric acid and its contact with skin, eyes, or clothing can cause severe burns.

Explosive Gases! No flames, No sparks, No smoking near battery.

ALWAYS wear safety glasses and protective gear near battery.

DO NOT TIP battery beyond a 45° angle in any direction.

ALWAYS keep batteries out of reach of children.

Before making any inspections, repairs, etc.: disengage PTO, stop unit and engine, remove key, allow moving parts to stop.

Allow hot parts to cool.

ALWAYS block wheels, engage parking brake and know all jack stands are strong, secure and will hold weight of unit during maintenance.

An extension spring, when extended, stores energy and can be dangerous. Always use tools specifically designed for installing or removing an extension spring. Always compress or extend springs slowly.

ALWAYS maintain unit in safe operating condition. Damaged or worn out muffler can cause fire or explosion.

Keep hardware, especially blade attachment bolts, tight.

Maintain or replace safety and instruction labels, as necessary.

For unit storage or extended storage:

- NEVER store with fuel in fuel tank, inside a building where any ignition sources are present.
- Allow engine to cool completely.

Use only attachments or accessories designed for your unit.

Check attachment components frequently. If worn or damaged, replace with manufacturer's recommended parts.

Use extra care with grass catchers and other attachments. These can change the stability of the unit. Use only approved hitch points.

ALWAYS be aware of attachments when turning. ALWAYS allow adequate clearance between attachments, personnel, and other objects.

ASSEMBLY

WARNING: AVOID INJURY. Read and understand entire *Safety* section before proceeding.

TOOLS REQUIRED

Phillips Screwdriver, Needle Nose Pliers, Open-End Wrench: 3/8, 7/16, 9/16 & 3/4 and/or Adjustable Wrench

REMOVE UNIT FROM CARTON

Remove the unit and components from the shipping container.

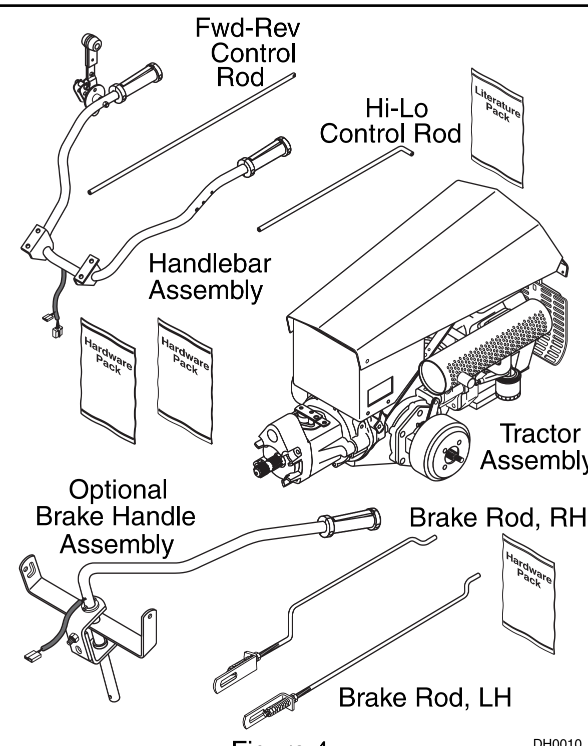


Figure 4

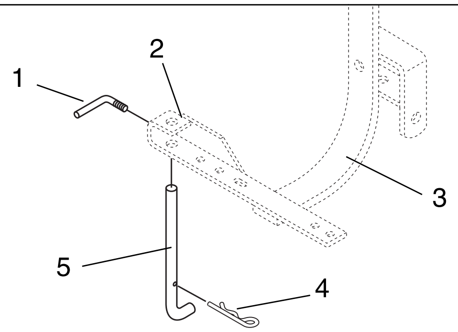
ASSEMBLY

Install Hubs and Wheels

For Semi-Pneumatic Wheels: install bushings and wheel/hub assemblies onto tractor axles. For all other wheels: install hubs to axles and secure wheels to hubs with hardware provided.

Install Kick Stand

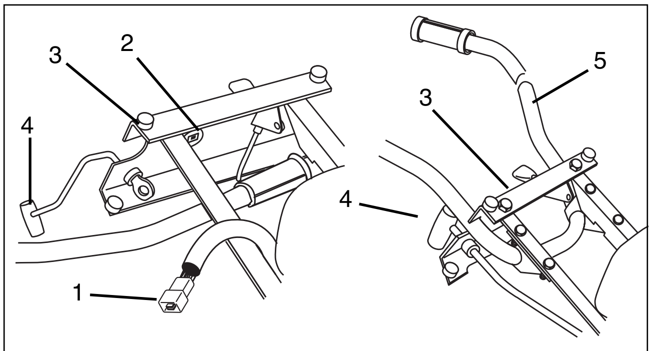
Slide kick stand into the righthand side of the lower bracket on the rear hitch. Secure it in position with the adjusting handle. The hair pin holds kick stand in the raised position.



1. Adjusting Handle
2. Lower Bracket
3. Rear Hitch
4. Hair Pin
5. Kick Stand

Figure 5 DH0080

Position Handlebar

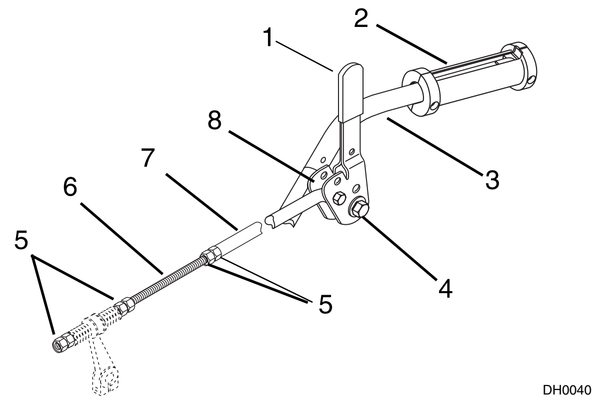


1. Ignition Switch Harness
2. Ignition Switch
3. Instrument Panel
4. Control Lever
5. Handlebar (Left)

Figure 6 DH0020

IMPORTANT: DO NOT damage ignition harness and wires when positioning handlebar.

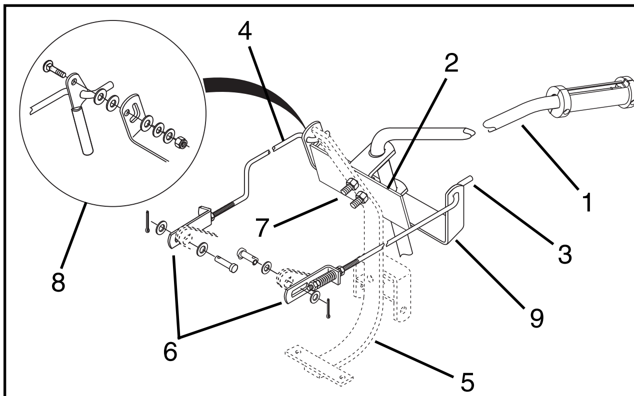
1. Position the handlebar right side up.
2. Move the left handle of the handlebar under the right side of the frame, across the engine and out between the left side of the frame and the PTO control.
3. Rotate the handlebar into the mounting position.
4. Retain the handlebar in position with four 3/8-16 x 1 1/4 bolts and locknuts and tighten hardware (Figure 6).
5. Connect the wiring harness from handlebar to the unit.
6. Mount the Hi-Lo gear control handle assembly and pivot to the left handlebar with a 1/2-13 x 3 1/2 bolt, locknut, and washer (Figure 7).



1. Hi-Lo Control Handle Assembly
2. Brake Handle Grip
3. Left Handlebar
4. 1/2-13 x 3 1/2 Hex Bolt
5. Adjust and Jam Nuts
6. Extension Rod
7. Hi-Lo Control Rod
8. Pivot

Figure 7

Assemble Steering Brakes (Optional)



1. Steering Brake Handle
2. Instruction Plate
3. Left Hand Brake Rod
4. Right Hand Brake Rod
5. Rear Hitch
6. Adjustment Bracket
7. Bolt and Nut (remove first)
8. Right Hand Brake Assembly
9. Brake Handle Weldment

Figure 8

1. Remove nut and bolt from brake handle brackets (Figure 8).

Left Hand Rod:

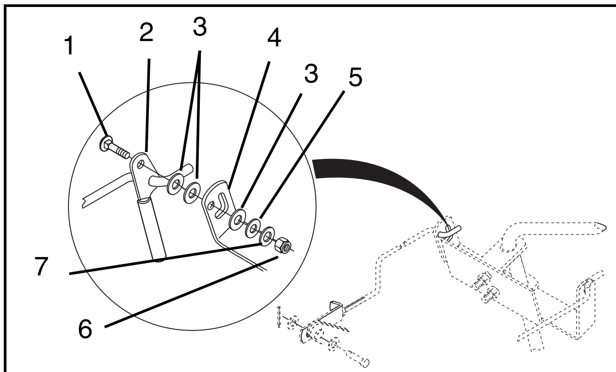
1. Hook the rear of the left hand brake rod into the left side of the brake handle weldment.

NOTE: Before installing on rear hitch, place the forward end of the left hand brake rod below muffler brace.

2. Connect the forward end to the pivot plate on the unit with a .375 x .75 clevis pin, two .406 x .812 x .065 flat washers and a .09 x .75 cotter pin. Insert clevis pin with cotter pin to the outside of adjustment bracket (Figure 8).

Right Hand Rod:

1. Hook the rear of the right hand brake rod into the right outside end of the brake handle weldment.
2. Place the carriage bolt through the brake handle.
3. Put two nylon washers on the bolt between the handle and the handlebar weldment.
4. Retain with another nylon washer, rubber washer, steel washer and lock nut (Figure 9).
5. Connect the adjustment bracket to the cam lever arm on unit with a clevis pin, two .406 x .812 x .065 flat washers and .09 x .75 cotter pin.
6. Push brake handle grip onto handle.
7. Connect the interlock plug to the wiring harness.
8. Fasten the instruction plate and the brake handle weldment to the rear hitch with the nut and bolt just removed and an additional 1/2-13 bolt and locknut.
9. Adjust brakes per *Adjustments*.

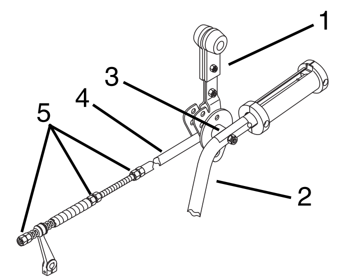


1. Carriage Bolt
2. Parking Brake Handle
3. Nylon Washer
4. Brake Handle Weldment
5. Rubber Washer
6. Lock Nut
7. Steel Washer

Figure 9

Connect Gear Shift and Directional Control Rods

Connect the Fwd/Rev and Hi-Lo gear control rods to the tractor and their respective handles using bushings, 1/4-20 x 1.5 bolts, .281 x .625 x .065 x flat washers and 1/4-20 locknuts. See the Hi-Lo gear control (Figure 7) and Fwd/Rev control (Figure 10). See *Service and Adjustments* on page 16 for adjustments.



1. Fwd/Rev Control Handle
2. Right Handlebar
3. Hand Lever Pivot
4. Fwd/Rev Control Rod
5. Adjust and Jam Nuts

Figure 10

Install Attachment(s)

Install each attachment following instructions provided in the attachment manual.

Charge Battery

See See *Service Battery* on page 15.

Fill Engine Fuel Tank

Add clean fuel to fuel tank. See Engine Manual for correct type and capacity.

Check Engine Oil

Check and add oil if needed. See Engine Manual for specifications.

Check Safety Interlock System

⚠ **WARNING:** FAILURE OF INTERLOCK, together with improper operation could result in death or serious injury.

Be sure that safety interlock system operates correctly. See *Safety Interlock System* on page 11.

Lubricate Pivot Points

Put a drop of engine oil on the pivots of the throttle lever, the direction control lever, the gear shift lever, the PTO control, and range shift handle.

Check Function of all Controls

⚠ **WARNING:** FAILURE OF CONTROLS could result in death or serious injury.

Ensure unit runs and performs properly.

WARNING: AVOID INJURY. Read and understand entire *Safety* section before proceeding.

CONTROLS AND FEATURES

NOTE: Read the attachment(s) and unit manuals before operating the equipment. Operate the unit only from the operator's position, behind the handlebars. Service the unit and attachment before operating.

Refer to Controls and Features for the following.

Safety Interlock System

CAUTION: The operator presence control helps protect the operator from the moving parts of the attachment and the powered movement of the equipment.

NOTE: One of the operator presence control levers must be depressed so the power take off (PTO) or direction control lever can be operated.

Test the safety interlock system at each operation. If the system does not function properly, do not operate the unit until repairs are made.

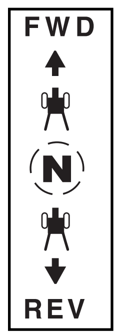
To test with engine off:

1. With engine off, set controls as listed in line A of the table below.
2. Try to start the engine. Engine must not crank.
3. Repeat steps 1-2 for lines B-C of the table below.

To test with engine running:

1. Start engine according to *To Start and Shut Off Engine* on page 12.
2. Set the controls as listed in line D of the table below. Engine must stop.
3. Repeat steps 1-2 for line E of the table below. Engine must stop.

TEST	PTO	DIRECTION CONTROL LOCKED FORWARD	KEY	OPERATOR PRESENCE CONTROL	ENGINE
With Engine Off					
A	Off	Yes	On	Off	Won't Crank
B	On	No	On	Off	Won't Crank
C	Off	Yes	On	On	Won't Crank
With Engine On					
D	Off	Yes	On	Off	Stops
E	On	No	On	Off	Stops



Direction Control Lever

The direction control lever controls the movement of the unit. Push the control forward to go forward. Pull the control back to move the unit backwards.

NOTE: The direction control lever can be locked in the forward position. The lever must be held in the reverse position to travel backwards.



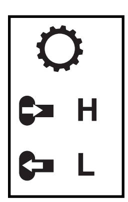
Gear Shift Lever

The gear shift lever has two operating positions. The forward ("HIGH") position is the fast gear. The rearward ("LOW") position is the slow gear.

The gear shift lever also controls the PTO speed. The forward ("HIGH") position is the fast PTO speed. The rearward ("LOW") position is the slow PTO speed.

NOTE: The gear shift lever must be in the neutral position to engage PTO lever.

NOTE: The gear shift lever must be in the "HIGH" or "LOW" position to properly transmit power to the PTO or wheels.

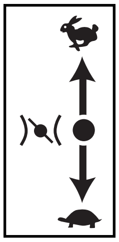


Range Shift Handle

The range shift handle has two operating positions. Pull the handle to the rearward ("LOW") position for the slow speed. Push the handle to the forward ("HIGH") position for the fast speed.

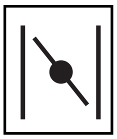
NOTE: On two-speed models, use the direction control lever to rock the unit back and forth while moving the range shift handle to help align the clutch teeth and engage the axle.

WARNING: Never move the range shift handle while on a slope or while the tractor is moving. Move the handle only when the tractor is on level ground and stopped (except for rocking to engage the clutch as described above).



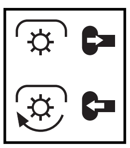
Throttle Lever

The throttle lever is used to control the engine speed. To increase the engine speed, move the lever up to the “FAST” position. To decrease the engine speed, move the lever down to the “SLOW” position.



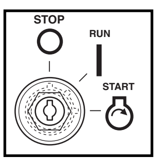
Choke Control

The choke control is used to choke a cold engine for starting. The choke control is located on the instrument panel. On 8.5HP, 12HP and 13.5HP tractors, push the choke lever up to the “ON” position to choke the engine. On all other tractors, pull the choke control knob out to the “ON” position to choke the engine.



PTO Control

The PTO control is used to connect or disconnect the engine power to an attachment. The forward position is “OFF”; the rearward position is “ON”.



Ignition Switch

The ignition switch is used to start (electric start models) and stop the engine.

Hourmeter

The hourmeter shows total time which the ignition switch has been in the “ON” position.

Fuse

Electric start models have a fuse to protect the electrical system.

Kick Stand

The kick stand is used to hold the tractor level when there is no attachment on the tractor. The kick stand must be in the raised position when moving the tractor.

Brake Handlebar

On tractors with steering brakes, the brake handlebar is used to steer the tractor. Swing the brake handlebar left for a right turn or right for a left turn.

Parking Brake (optional on 985115)

The parking brake is used to hold the tractor in position when not in use.

FILL FUEL TANK

WARNING: Use caution with fuel. Fuel is very flammable. Keep fuel in a clean and tight container. Keep fuel away from fire or heat. Never put fuel in the fuel tank while the engine is running or hot. Clean up any spilled fuel before starting the engine.

Add fuel to the fuel tank as needed. See engine manual for the correct type and grade of fuel.

1. Put the unit in an open area.
2. Stop the engine and lock the brake.
3. Clean the fuel cap and the area around the fuel cap to prevent dirt from entering the fuel tank.
4. Remove the cap from the fuel tank.
5. Fill the fuel tank. Be careful not to spill the fuel.
6. Install the cap on the fuel tank and tighten.
7. Clean up any spilled fuel before starting the engine.

TO STOP IN AN EMERGENCY

1. Turn the ignition key to "Off".
2. Move the HI/LO to the “NEUTRAL” position and the PTO control to the “OFF” position.
3. Wait for all moving parts to stop before leaving the operator’s position.

TO START AND SHUT OFF ENGINE

Manual Start

1. Check each item in "Before Each Use" in the Maintenance Schedule.
2. Move the direction control lever to the “NEUTRAL” position.
3. Ensure the PTO control is in the “OFF” position and the gear shift lever is in the “NEUTRAL” position.
4. Put the key in the ignition switch and turn it to the “ON” position.
5. If the engine is cold, apply the choke. See Engine Manual for detailed instructions.
6. Set the throttle to the proper starting position. After the engine starts, adjust the choke as needed.
7. Pull the starter handle out until compression is felt in the engine. Then pull with one swift continuous motion. Hold the starter handle to allow a slow rewind of the rope.
8. If the engine does not start after six pulls of the starter, see *Troubleshooting*.

Electric Start Engine

1. Check each item in "Before Each Use" in the Maintenance Schedule.
2. Move the direction control lever to the “NEUTRAL” position.

3. Ensure the PTO control is in the “OFF” position and the gear shift lever is in the “NEUTRAL” position.
4. If the engine is cold, apply the choke. See Engine Manual for detailed instructions.
5. Set the throttle to the proper position. After the engine starts, adjust the choke as needed.
6. Put the key in the ignition switch. Turn the key to the “START” position. When the engine starts, release the key.

NOTE: Do not operate the starter for more than 15 seconds. Allow 45 seconds for cooling before operating the starter again.

7. If the engine does not start after six tries, see *Troubleshooting*.

Stopping the Engine

1. Move the direction control lever to the “NEUTRAL” position.
2. Move the throttle control to the “SLOW” position.
3. Move the HI/LO control to the “NEUTRAL” position and the PTO control to the “OFF” position.
4. Turn the ignition key to the “OFF” position. Remove the ignition key before leaving the tractor.

TO OPERATE UNIT

Operating the Transmission

Learn to operate the tractor in an open area while using a slow gear and slow engine speed.

1. Start the engine.
2. Move the gear shift lever to the “HIGH” or “LOW” position.
3. Move the range shift handle to the “HIGH” or “LOW” position.
4. Move the throttle lever above the “SLOW” position (fast enough so that the engine will not stall).
5. Depress an operator presence handle.

NOTE: One of the operator presence control levers must be held down at all times whenever the transmission is in gear and/or the PTO lever is in the “ON” position.

6. To go forward, move the direction control lever forward until the lever stays in the forward position. If the lever is not in the full forward position, the clutch will slip and cause premature clutch wear.
7. To move backward, hold the direction control lever to the rear. The lever will return to “NEUTRAL” when released.
8. To stop the tractor, put the direction control lever in the “NEUTRAL” position. If the PTO is off, you can release the operator presence handle.

USING THE PTO

To Engage PTO:

1. Start the engine.
2. After the engine is warm, move the throttle lever just above the “SLOW” position.
3. Move the gear shift lever to the ‘NEUTRAL” position. Depress an operator presence handle.
4. Pull the PTO control back to the “ON” position with one continuous, fast pull.
5. Move the throttle lever to the “FAST” position.
6. Move the gear shift lever to the “HIGH” or “LOW” position.

NOTE: The gear shift lever must be in either the “HIGH” or “LOW” position to properly power the attachment.

7. Operate the direction control lever for desired travel.

To Disengage PTO:

1. Stop the tractor with the direction control lever.
2. Move the throttle lever to the “SLOW” position.
3. Move the gear shift to the “NEUTRAL” position.
4. Push the PTO control in (forward) to the “OFF” position.

Using the Steering Brakes (optional)

The steering brakes are used when the tractor is being driven forward.

To make a right turn, push the brake handlebar to the left.

To make a left turn, pull the brake handlebar to the right.

⚠ **CAUTION:** Use only the tractor handlebars to steer when driving in reverse.

To Travel to Another Work Area

1. Disengage PTO.
2. Reduce engine speed.
3. Travel forward to other work area.

PARKING

1. Stop the unit on level ground.
2. Put the PTO lever in the “OFF” position.
3. Turn off and remove ignition key.
4. Move the shift control to first gear position.
5. Apply parking brake (if equipped.) Pull up on the brake handle until the brake rod is at the top of the slot.

TO TRANSPORT UNIT

1. Move unit onto transport vehicle.
2. Tie unit down securely. Do not secure by rods, linkages or controls that may be damaged.

TIPS FOR OPERATION

Use slow gears when operating the tractor on rough ground, slopes, small areas, near buildings or other obstacles.

Use a slow gear and a fast engine speed when operating a snowblower, rotary cultivator, or a mower in heavy grass.

Walk behind, never between the handlebars.

MAINTENANCE

> **WARNING:** AVOID INJURY. Read and understand entire *Safety* section before proceeding.

MAINTENANCE SCHEDULE

	Before Each Use	25	100	200	Before Storage
Check Sasfety Interlock	●				
Check Engine Oil	●				●
Check Air Cleaner	●*	●			●
Check Engine Cooling		●			
Lubricate Control Linkage		●			
Check Fasteners		●			
Check Clutches		●			
Adjust PTO Brake			●		
Adjust Slip Clutch			●		
Lubricate Transmission					
Service Battery				●	●

CHECK SAFETY INTERLOCK SYSTEM

Test the safety interlock system at each operation. If the system does not function properly, do not operate the unit until repairs are made. See *Safety Interlock System* on page 11.

CHECK ENGINE OIL

Check the engine oil daily, or before each use. Never operate the engine when the oil level is below the low mark on the dipstick. See the engine manual for oil change schedule and detailed instructions.

CHECK AIR CLEANER

Check the air cleaner daily. See the engine manual for detailed instructions.

CHECK ENGINE COOLING

Check the cooling system every 25 hours. Clean all of the grass and other material from the cooling fins and intake screen of the engine. If necessary, remove the engine shrouds to clean the engine.

LUBRICATE CONTROL LINKAGE

Every 25 hours of operation put a drop of engine oil on the pivots of the throttle lever, the direction control lever, the gear shift lever, the PTO control, and range shift handle.

NOTE: There are no grease fittings on the tractor.

CHECK FASTENERS

Check all fasteners after 25 hours of operation to make sure that they are tight. Replace any fastener that is missing.

CHECK CLUTCHES

After 25 hours of operation, check the adjustment of the forward-reverse and gear clutches.

The reverse clutch is adjusted correctly when the direction control lever stops 15 degrees past vertical to the rear. The lever should return to neutral position from reverse.

The forward clutch is adjusted correctly when the direction control lever is in the full forward position and the large spring has a coil clearance of .010” (.254mm).

The Hi-Low Gear clutch is adjusted correctly when the gear shift lever is in the “HIGH” or “LOW” position and the spring coils are .010” (.254mm) apart.

To adjust clutches, see *Service and Adjustments*.

ADJUST PTO BRAKE

Adjust the PTO brake after every 100 hours of operation. See *Service and Adjustments*.

ADJUST SLIP CLUTCH

Adjust the slip clutch after every 100 hours of operation. See *Service and Adjustments*.

LUBRICATE TRANSMISSION

After every 100 hours of operation, check the level of the lubricant in the transmission. Never operate the tractor when the transmission oil level is below the “LOW” mark on the dipstick.

1. Stop the engine and raise the hood.
2. Make sure that the tractor is level.

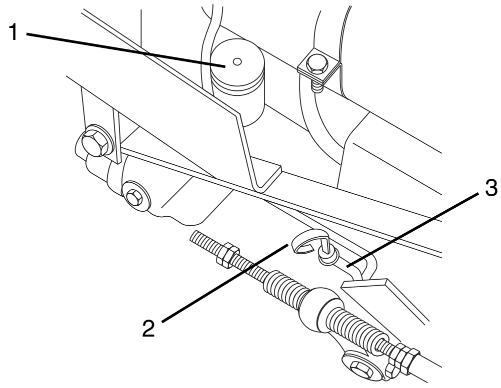


Figure 11

3. Clean the dipstick tube and the dipstick (Figure 11).
4. Remove the dipstick, wipe it with a clean cloth or towel and put it back in the tube.
5. Pull the dipstick out again and look at the oil.
6. If the oil level is below the low mark on the dipstick, add oil.
7. Clean the area around the filler plug.
8. Remove the filler plug.
9. Add new, clean lubricant until the dipstick indicates that the oil level is correct. See Engine Manual.
10. Install the filler plug and the dipstick.

SERVICE BATTERY

WARNING: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Terminals

Inspect battery and terminals every 25 hours.

To clean terminals:

1. Remove battery hold down.
2. Remove battery cables from terminals.
3. Clean or service battery away from unit. Remove corrosion from battery terminals and cable connections with wire brush, then wash with a weak baking soda solution.
4. Apply a thin coat of dielectric grease or petroleum jelly to terminals and cable ends to retard corrosion.
5. Replace battery and secure with battery hold down.

Charge Battery

WARNING: FROZEN BATTERIES CAN EXPLODE and result in death or serious injury.

DO NOT charge a frozen battery. Let the battery thaw before charging.

WARNING: ELECTRIC SHOCK may result in injury and/or damage to unit.

DO NOT allow objects to come into contact with both terminals at the same time.

REVERSE CONNECTIONS may result in sparks which can cause death or serious injury. ALWAYS connect positive (+) lead of charger to positive (+) terminal, and negative (-) to negative (-) terminal.

ALWAYS connect positive (+) cable FIRST, and negative (-) cable SECOND.

WARNING: EXPLOSIVE GASES from battery can cause death or serious injury. ALWAYS keep open flames, sparks or smoking materials away from batteries.

POISONOUS BATTERY FLUID contains sulfuric acid. Contact with skin, eyes or clothing can cause severe chemical burns. ALWAYS wear safety glasses and protective gear near battery.

DO NOT TIP any battery beyond 45˚ angle in any direction.

ALWAYS KEEP BATTERIES OUT OF REACH of children.

Battery Electrolyte First Aid

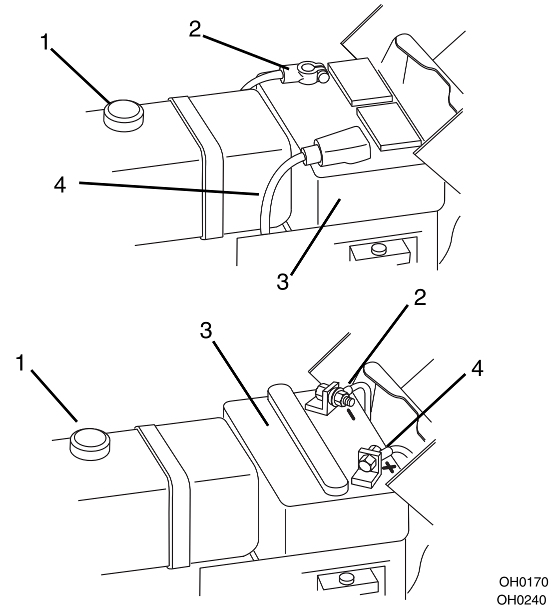
- **External Contact:** Flush with water.
- **Eyes:** Flush with water for at least 15 minutes and get medical attention immediately!
- **Internal Contact:** Drink large quantities of water. Follow with Milk of Magnesia, beaten egg or vegetable oil. Get medical attention immediately! DO NOT induce vomiting!

IMPORTANT: DO NOT fast charge. Charging at a higher rate will damage or destroy battery.

IMPORTANT: ONLY use an automatic charger designed for use with your battery. ALWAYS follow information provided on battery and battery charger. Contact battery and charger manufacturers for detailed instructions.

1. Remove battery hold down.
2. Disconnect negative (–) cable first, then positive (+) cable (Figure 12).
3. Remove battery.

4. Place battery on bench or other well-ventilated area.
5. Connect positive (+) lead of charger to positive (+) terminal, and negative (–) lead to negative (–) terminal.
6. Charge battery according to charger and battery manufacturers' instructions.
7. Reinstall battery on unit and connect positive (+) cable first, then negative (–) cable and secure to unit with battery hold down.



1. Fuel Cap
2. Negative Battery Cable
3. Battery
4. Positive Battery Cable

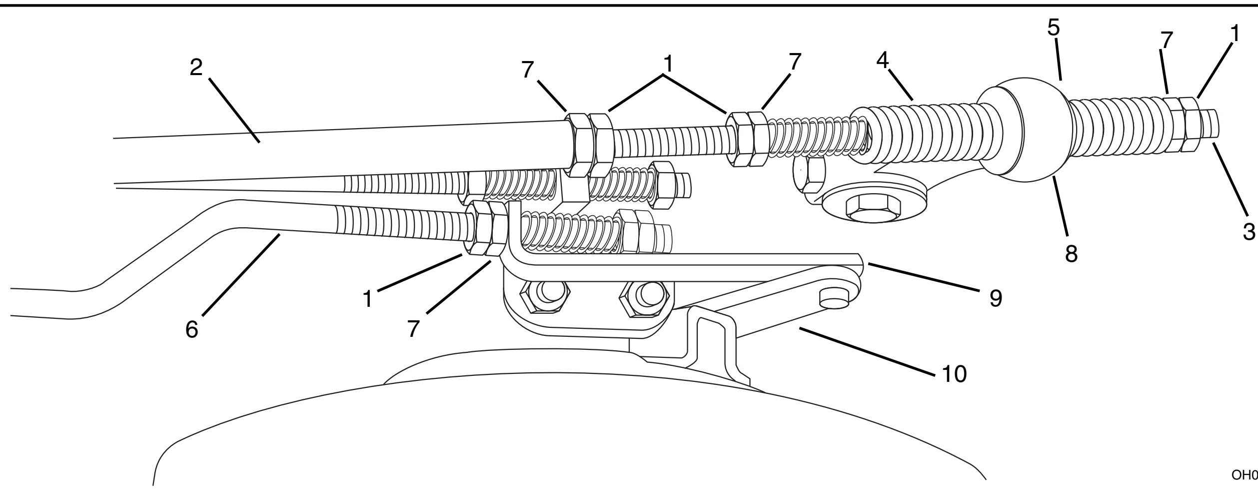
Figure 12

SERVICE AND ADJUSTMENTS

> **WARNING:** AVOID INJURY. Read and understand entire *Safety* section before proceeding.

FORWARD-REVERSE CLUTCH

> **WARNING:** Stop the engine before adjusting the forward-reverse clutch.



1. Jam Nuts
2. Fwd-Rev Control Rod
3. Fwd-Rev Control Extension Rod
4. Fwd-Rev Neutral Spring
5. Large Spring
6. Right Brake Rod Assembly
7. Adjusting Nuts
8. Fwd-Rev Lever Assembly
9. Adjustment Bracket
10. Cam Lever Arm

Figure 13

To adjust the reverse clutch (Figure 13) :

1. Loosen the two nuts on the end of the fwd-rev control extension rod.
2. Turn the adjusting nut so that the direction control lever stops 15 degrees past vertical to the rear.
3. Hold the adjusting nut and tighten the jam nut against it.

To adjust the forward clutch (Figure 13) :

1. Put the direction control in the forward position.
2. Loosen the two rear nuts on the fwd-rev control extension rod.
3. Turn the adjusting nut until the Fwd-Rev neutral spring coils are .010” (.254mm) apart.
4. Hold the adjusting nut and tighten the jam nut against it.

HI/LOW GEAR CLUTCH

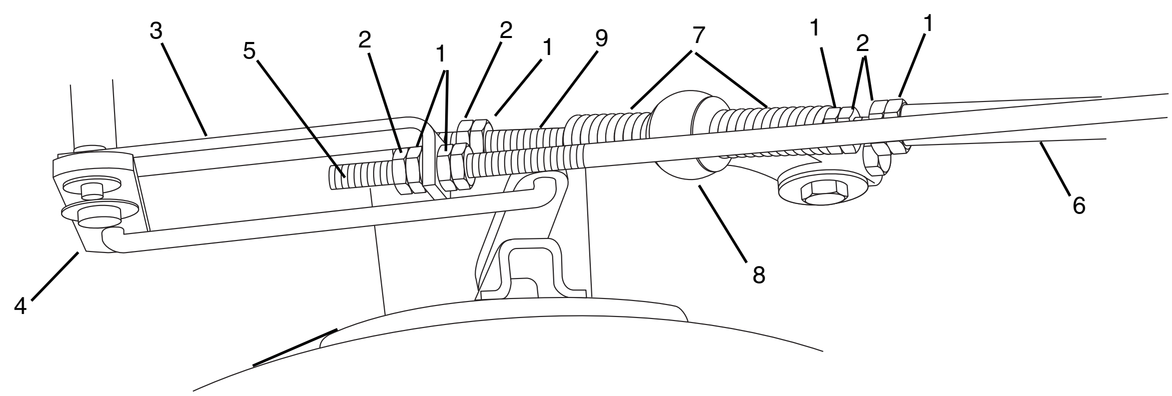
WARNING: Stop the engine before adjusting the gear clutch.

To adjust the “HIGH” clutch:

1. Loosen and separate the two nuts to the rear of the Hi-Low control extension rod (Figure 14).
2. Put the gear shift lever in the “HIGH” position.
3. Turn the adjusting nut near the spring until the spring coils are .010” (.254mm) apart.
4. Move the gear shift lever to the “NEUTRAL” position.
5. Hold the adjusting nut and tighten the jam nut against it (Figure 14).

To adjust the “LOW” clutch:

1. Loosen and separate the two nuts on the end of the Hi-Low control extension rod.
2. Put the gear shift lever in the “LOW” position.
3. Turn the adjusting nut near the spring until the spring coils are .010” (.254mm) apart.
4. Move the gear shift lever to the “NEUTRAL” position.
5. Hold the adjusting nut and tighten the jam nut against it.



1. Adjusting Nuts
2. Jam Nuts
3. Adjustment Bracket
4. Pivot Plate
5. Left Brake Rod Assembly
6. Hi-Low Control Rod
7. Large Spring
8. Hi-Low Lever Assembly
9. Control Extension Rod

Figure 14

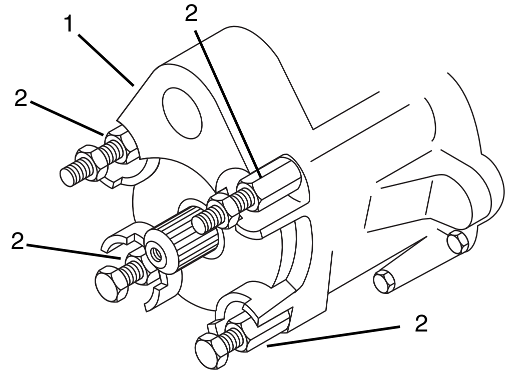
PTO BRAKE

WARNING: Stop the engine before adjusting the PTO brake.

To adjust the PTO brake:

1. Remove the attachment and lower the rear of the tractor to the ground.
2. Carefully clean the front of the transmission. Remove the quick hitch studs from the transmission (Figure 15).
3. Remove the quick hitch adapter and PTO brake assembly (Figure 15).

NOTE: The attachment gasket must be replaced if damaged.



1. Quick Hitch Adapter 2. Quick Hitch Stud

Figure 15

IMPORTANT: Tighten and loosen the bolts in a cross sequence as shown in Figure 16.

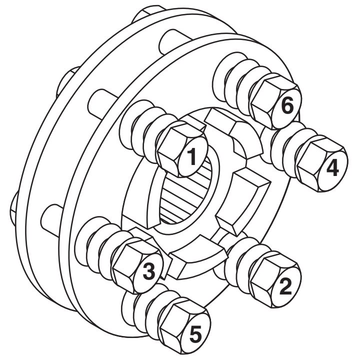
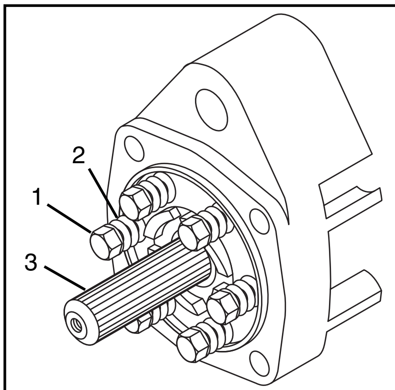


Figure 16

4. Tighten all PTO brake bolts until the springs are solid. Back all bolts up 1/2 turn (Figure 17).

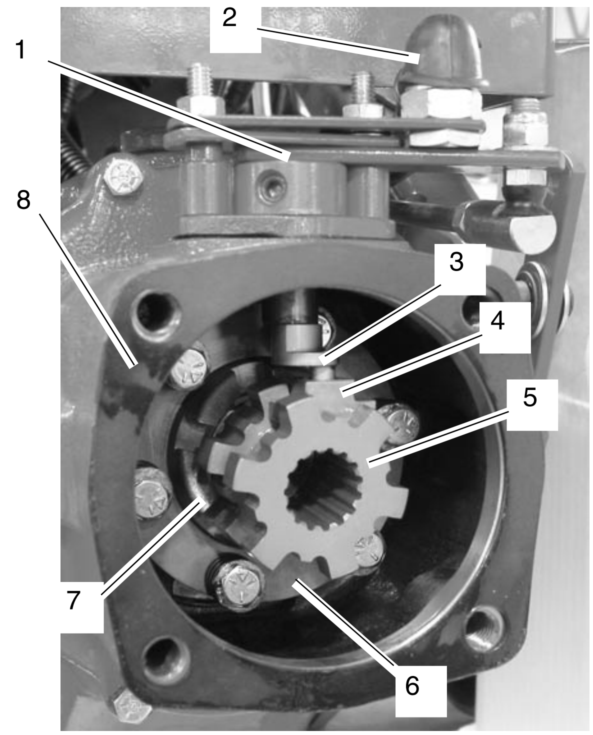


1. PTO Brake Bolts
2. Springs
3. PTO shaft

Figure 17

NOTE: Make sure the trunnion block is on the shipper shaft and held in place by the dog. The dog should rest on the spiral teeth of the clutch dog plate. Install the gasket (Figure 18).

Align the splines on the quick hitch shaft with those in the dog. Slide the quick hitch casting and PTO brake assembly back into the place on the front of the transmission. Install the quick hitch studs and tighten.



1. Shifter Parts
2. Wiring Harness
3. Shipper Shaft
4. Trunnion Block
5. Dog
6. PTO Slip Clutch Assembly
7. Clutch Dog Plate
8. Gasket

Figure 18

SLIP CLUTCH

WARNING: Stop the engine before adjusting the slip clutch.

To adjust the slip clutch:

1. Remove the attachment and lower the rear of the tractor to the ground.
2. Carefully clean the front of the transmission.
3. Remove the quick hitch studs from the transmission.
4. Remove the quick hitch PTO assembly and PTO brake assembly.

NOTE: The attachment gasket must be replaced if damaged.

5. Remove the dog and trunnion block (Figure 18).
6. Disconnect the wiring harness from the PTO brake interlock switch.
7. Remove the shifter parts.
8. Slide the shipper shaft assembly through the top of the advance casting.
9. Slide the clutch assembly and pinion shaft out of the transmission (Figure 18).
10. Remove the retaining ring and slide the clutch assembly off of the pinion shaft.

IMPORTANT: Tighten and loosen the bolts in a cross sequence as shown in Figure 16.

11. Turn all of the jam nuts counterclockwise to loosen.
12. Torque bolts to 70 lbf-in in two stages. First tighten bolts to 20 lbf-in in pattern shown (Figure 16). Then tighten to 70 lbf-in in same pattern.
13. Slide the clutch assembly back onto the pinion shaft.
14. Install the retaining ring and slide the pinion shaft completely into the transmission.
15. Reinstall the shipper shaft and other parts that were removed (Figure 18). Make sure the trunnion block is on the shipper shaft and held in place by the dog. The dog should rest on the spiral teeth of the clutch dog plate.
16. Install the gasket.
17. Align the splines on the quick hitch shaft with those in the dog.
18. Slide the quick hitch casting and PTO brake assembly back into place on the front of the transmission.
19. Install the quick hitch studs and tighten.

STEERING BRAKE ADJUSTMENT (OPTIONAL):

1. Park the tractor in a level area.
2. Put the parking brake handle in the “OFF” (down) position.
3. Loosen the two nuts on the right and left brake rod assembly adjustment brackets (Figure 13 and Figure 14).
4. Turn the adjusting nuts until the brake handle cross bar is parallel with the instrument panel. (See *Controls and Features*.)
5. Move the brake handlebar all the way to the right and measure the distance from the right end edge of the brake handle cross bar to the right side of the instrument panel.
6. Move the brake handlebar all the way to the left and make the same measurement on the left.
7. Turn the adjusting nuts until the difference between the two measurements is 1/2” to 3/4” (13 to 19mm).

NOTE: Turn both adjusting nuts the same amount, clockwise to increase the measurement difference or counterclockwise to decrease the measurement difference.

8. Tighten the jam nuts.
9. Loosen the two nuts below the compression spring on the right brake rod assembly. Turn the adjusting nut until the desired tension for the right brake is set.
10. Tighten the jam nut.

STORAGE

> ⚠ **WARNING:** AVOID INJURY. Read and understand entire *Safety* section before proceeding.

Check each item in "Before Storage" in the Maintenance Schedule. See Engine Manual for detailed instructions on preparing the engine for storage.

When The Tractor Will Not Be Operated For Two Months Or More:

1. Do the daily and 25-hour maintenance, but do not add gasoline.
2. Clean the tractor. Paint or oil bare metal surfaces to prevent rust.

IMPORTANT: NEVER spray unit with high-pressure water or store unit outdoors. Water can seep into sealed bearings, which are sealed against dirt and debris only, causing reduced component life.

NOTE: Do not use harsh or abrasive cleaners on any painted surface. Do not allow gasoline or oil to remain on any surface.

3. Refer to the engine manual and prepare the engine for storage.
4. Charge the battery initially and then every three weeks.

To Put The Tractor Into Service:

1. Refer to the engine service manual and prepare the engine for service.
2. Charge the battery.
3. Put fresh, clean gasoline in the fuel tank.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTION
Starter will not operate when ignition key is turned to “S” position.	1. Fwd-Rev lever in “FORWARD” position. 2. PTO engaged. 3. Loose battery cable(s). 4. Blown fuse. 5. Discharged battery. 6. Defective solenoid switch. 7. Defective starter.	1. Place Fwd-Rev lever in neutral position. 2. Disengage PTO. 3. Clean and tighten battery connections. 4. Replace fuse. 5. Charge battery. 6. Replace. Call your dealer. 7. Replace starter. Call your dealer.
Solenoid switch clicks but starter will not operate when ignition is turned to “S” position.	1. Discharged battery. 2. Loose battery cable. 3. Defective starter.	1. Charge the battery. See *Maintenance*. 2. Clean and tighten battery connections. 3. Replace starter. Call your dealer.
Engine starter operates but engine will not start when ignition switch is turned to “S” position.	1. Fuel tank empty. 2. Fuel shut-off valve at the fuel tank turned off. 3. Relay defective. 4. Engine failure.	1. Fill tank with clean, fresh fuel. 2. Turn fuel shut-off valve on. 3. Replace relay. Call your dealer. 4. See Engine Manual.
Engine starts but runs roughly.	1. Engine choke in “ON” position. 2. Restricted air cleaner element. 3. Restricted fuel cap vent. 4. Engine carburetor malfunction. 5. Engine electrical system trouble.	1. Move engine choke to "OFF". 2. Clean air cleaner. See engine manual. 3. Clear obstruction from fuel cap vent. 4. See Engine Manual. 5. See Engine Manual.
Engine stops when PTO or Fwd-Rev is engaged.	1. Operator presence handle not pressed. 2. Operator presence handle out of adjustment. 3. Faulty switch.	1. Press and hold at least one operator presence control. 2. Call your dealer. 3. Replace switch. Call your dealer.
The tractor will not move when the direction control lever is moved to "FORWARD" or "REVERSE."	1. Gear shift lever in “NEUTRAL” position. 2. Range shift handle in "NEUTRAL” position. 3. Fwd-Rev clutch needs adjustment. 4. Internal transmission damage.	1. Place gear shift lever in Hi or Low position. 2. Place range shift lever in Hi or Low position. 3. Adjust Fwd-Rev clutch. See *Adjustments* or call your dealer. 4. Call your dealer.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTION
Attachment will not operate.	1. Gear shift lever in “NEUTRAL” position. 2. Attachment jammed or damaged. 3. Attachment slip clutch out of adjustment or damaged. 4. Shipper shaft and clutch dog loose and out of adjustment.	1. Place gear shift lever in Hi or Low position. 2. Clear debris from attachment. Repair before restarting engine. 3. Adjust or repair. 4. Adjust or repair.
Attachment operates slowly	1. Hi/Low clutch worn. 2. Attachment slip clutch needs adjustment or repair. 3. Attachment damaged. 4. Engine problems.	1. Adjust or repair. 2. Adjust or repair. 3. Repair attachment. 4. See Engine Manual.
Transmission will not go into “HIGH” range. Jumps out of range	1. Debris blocking the linkage. 2. Rust on the clutch sliding pin. 3. Shifting clutch dogs worn/damaged.	1. Clear debris from linkage. Repair before restarting engine. 2. Clean or replace. 3. Adjust or replace.

ACCESSORIES

See your authorized Gravely dealer to add these optional accessories.

Mowing	
78500600	30” Mower Drive (Short)
78500700	30” Mower Drive (Long)
78501200	Front Mount Kit
78501300	Front Anti-Scalp Roller
78501400	Rear Anti-Scalp Roller
78501500	30” Weight Kit
Garden	
78501600	Rotary Cultivator Drive
78501700	Planter Drill (Less Blades)
78505900	10” Planter Drill Blade
78506000	19” Planter Drill Blade
Snow Removal	
78501900	48” Snow Dozer Hitch
78502000	48” Snow Dozer Counterweight Kit
78502100	48” Snow Dozer Skid Kit
78502300	44" Power Brush Completing Kit
78502400	Tire Chains (4:00 x 8) (Pair)
78502500	Tire Chains (7:50 x 8) (Pair)
78502600	Tire Chains (8:50 x 8) (Pair)
Miscellaneous	
78502700	Pow-R-Steering Kit
78502900	Quick Hitch Pin Kit
78503000	Attachment Adapter Kit

ACCESSORIES

78503100	Dual Wheel Spacers
78509800	Dual Wheel Spacers
78503200	Trailing Hitch Kit
78510600	Coupler Strut Weldment Kit
78503500	High Performance Air Cleaner Kit
78503600	QS Muffler Kit
78506400	Tractor Cover
78506500	Retro-Fit Kit
78802700	Handle Interlock Kit

ATTACHMENTS

See your authorized Gravely dealer to add these optional attachments.

885001	30” Mower Deck
885002	30” Mower Deck
885003	40” Mower Deck
885009	42” Sickle Mower
885010	Rotary Plow
885011	Cultivator
833007	32” Sno Thro
885014	48” Dozer Blade
885015	44” Brush
885013	Winter Cab
885016	Cart

SERVICE PARTS

Be sure to always use genuine Gravely parts to keep your unit running like new.

Part no.	Qty	Description
01554800	1	Battery (Robin and Kohler Models)
04202200	1	Battery (Briggs Model)
21527200	1	Air Cleaner (Robin EH25)
21527300	1	Assembly-Air Cleaner Element (Robin EH41)
21527100	1	Air-Cleaner Element (Robin EH25)
21540000	1	Air Cleaner (Kohler CS12ST)

SERVICE PARTS

21540100	1	Foam Precleaner (Kohler CS12ST)
08811700	1	Fuel-Filter (Robin)
08811700	1	Fuel Filter (Kohler)
21526800	1	Spark Plug (Robin EH25)
21526900	1	Spark Plug (Robin EH41)
21540200	1	Spark Plug (Kohler CS12ST)
08861651	3	Blade-50”
03498451	3	Blade-40”
08899700	1	Blade-30”
07226600	1	Belt-50” Mower drive
07226700	1	Belt-40” Mower drive

SPECIFICATIONS

Model Number	985114	985115	985117	985119
Height - in (cm)	36.5 (92.7)			
Length - in (cm)	58 (147.3)			
Width - in (cm)	25 (63.5)			
Weight - lbs (Kg)	425 (193)	420 (191)	428 (195)	420 (191)
Wheel Size - in (cm)	4.0 x 8 (10.2 x 20.3) Stud Tread 4.0 x 8 (10.2 x 20.3) Trac Tread 18 x 8.5-8 (45.7 x 21.6-20.3) Turf Chief 18 x 8.5-8 (45.7 x 21.6-20.3) Turf Saver 16 x 5 x 3 (40.6 x 12.7x 7.2) Semi-Pneumatic Ground Grip			
Tire Pressure	See Tire Sidewall			
Steering Brakes	7 x 1.75 Drum Type	N/A	7 x 1.75 Drum Type	
Engine	16 HP Briggs & Stratton	8.5 HP Robin EH25	13.5 HP Robin EH41	12.0 Kohler CS12ST
Engine Operating Fast Idle Speed - RPM	3300-1600			3300-1200
Fuel	See Engine Manual for type and grade			
Fuel Tank Capacity - gal (Liters)	1.5 (5.68)			
Transmission Oil Capacity - qt (Liters)	5.0 (4.73)			
Transmission Oil Type	SAE 30			
Engine Oil Type and Capacity	See Engine Manual			
Battery	12V BCI Group 22F, 42amp/Hr	12V BCI Group, 230 CCA. 29 min. Reverse Capacity		

2-Year Limited Warranty

Gravely Division of Ariens Company
655 West Ryan Street
P.O. Box 157
Brillion, WI 54110-0157
920-756-2141
Fax 920-756-2407
www.gravely.com

Gravely Division of Ariens Company (Gravely) hereby warrants to the original consumer purchaser that all Gravely Two-Wheel, Professional G, Pro, and ProMaster products will be free from defects in material and workmanship for a period of two (2) years from the date of purchase or 1000 hours, whichever comes first.

Protection Plan

Gravely will repair or replace any part found upon examination by Gravely to be defective. Such repair or replacement will be free of charge to the purchaser (labor and parts), except as noted below.

This warranty is subject to the following exceptions, conditions, and limitations:

Usage Requirement

The duration of this warranty shall be ninety days or 1000 hours, whichever comes first, if the product is rented or leased.

Purchaser's Responsibilities

- The purchaser must perform maintenance and minor adjustments per the operator's manual.
- The purchaser must notify Gravely or an authorized Gravely service representative of the need for warranty service.
- The purchaser must transport the product to and from the place of warranty repair.

Product Registration

- Returning the product registration card to Gravely will enable the company to contact the registrant with repair or replacement part information.

Service Parts and Accessories

- Service parts and accessories not purchased with the product covered by this warranty are warranted to be free of defects for a period of ninety (90) days following the date of purchase, and will be replaced free of charge (except for labor).

Service

- Warranty service must be done by an authorized Gravely dealer. To find an authorized Gravely service representative, contact Gravely at the website, number or address above.

Battery Warranty Prorated

- One to three months - Free replacement
- Four to twelve months - Prorated over 12 months

Exclusions (No Warranty)

- Normal maintenance, services, and normal replacement items, such as spark plugs, oil, oil filters, air filters, mufflers, belts, tires, shoes, runners, scraper blades, shear bolts, mower blades, mower vanes, headlights, light bulbs, knives, etc. are not covered by this warranty.
- Any equipment which has been altered, misused, misassembled, improperly adjusted, neglected, or damaged by accident is not covered by this warranty.
- Service completed by someone other than an authorized Gravely dealer is not covered by this warranty.
- Any attachment not approved by Gravely nor any parts that are not genuine Gravely service parts are not covered by this warranty.
- Engines and engine accessories are covered only by the warranty made by the engine manufacturer, and are not covered by this warranty.
- If the product is equipped with a Hydro-Gear transmission and/or Hydro-Gear drive components, the Hydro-Gear transmission and/or drive components are covered only by the warranty made by Hydro-Gear, and are not covered by this warranty.
- This warranty applies only to products purchased in the United States (including Puerto Rico) and Canada. In all other countries, contact place of purchase.

Gravely may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating Gravely to incorporate such design changes into previously manufactured products, nor shall such changes be construed as an admission that previous designs were defective.

LIMITATION OF REMEDY AND DAMAGES

Gravely's liability under this express warranty, and under any implied warranty that may exist, is limited to repair or replacement of any defective part. In no event shall Gravely be liable for incidental, special, or consequential damages (including lost profits). This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

DISCLAIMER OF FURTHER WARRANTY

Gravely makes no warranty other than what is expressly made in this warranty. If the law of your state provides that an implied warranty of merchantability, or an implied warranty of fitness for a particular purpose, applies to Gravely, any such implied warranty is limited to the duration of this express warranty.

Form: GLW2-122002

GRAVELY
A Division of Ariens Company
655 West Ryan Street
P.O. Box 157
Brillion, WI 54110-0157
920-756-2141
Fax 920-756-2407
www.gravely.com